



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,680	10/10/2005	Peter Klapschuk	3474/IUS	2495

23638 7590 03/19/2008
ADAMS INTELLECTUAL PROPERTY LAW, P.A.
Suite 2350 Charlotte Plaza
201 South College Street
CHARLOTTE, NC 28244

EXAMINER

ZIMMER, ANTHONY J

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,680

Applicant(s)

KLAPCHUK, PETER

Examiner

ANTHONY J. ZIMMER

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 9-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/IB)
Paper No(s)/Mail Date 7/21/2006 and 10/10/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-8, drawn to a method of treating a seed sample.

Group II, claim(s) 9-26, drawn to an apparatus.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The common technical feature between Groups I and II is the process of treating with microwaves, steam, and ozone; however this common technical feature fails to be a special technical feature as it does not involve inventive step over the prior art. For instance DE 19605650 teaches treating seeds with microwaves and steam (before storage) (see Use section of Derwent abstract) and Yvin US'009 teaches treating seeds with ozone prior to storage (see abstract). It would have been obvious to one of ordinary skill in the art to combine both processes in order to prepare seeds with prolonged storage times. Therefore Group I and Group II do not have a common special technical feature, and thus lack unity.

During a telephone conversation with C. Sidebottom on 5 March 2008 a provisional election was made to prosecute the invention of Group I, claims 1-8.

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 9-26 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claim 5, the term "Malathion, 2,4,-D" is used, this term cannot be found in the specification. In claim 8, the particular order of steps required is not found in the specification.

Claim Objections

Claim 8 is objected to because of the following informalities: In the second line of the claim there is a typo, "arc" is used instead of "are". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "significantly" in claim 1 is a relative term which renders the claim indefinite. The term "significantly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Art Unit: 1793

The term "substantially" in claim 1 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHILDRESS '390 in view of DENVIR '625.

CHILDRESS teaches a method of roasting raw seeds or nuts by placing nuts or seeds in a microwave oven in a package and cooking (subjecting to microwaves), which

then produces steam in the package from the moisture in the seeds (in other words, subjecting the seeds to microwaves and steam). See column 4, lines 7-65. Since the microwaves are intended to roast the seeds in CHILDRESS for human consumption it would have been obvious to one of ordinary skill in the art to use the microwaves and steam in CHILDRESS to heat the seeds to a roasting temperature (a temperature effective in inactive seeds). Also, CHILDRESS teaches that temperatures in a microwave can get as high as 350-450°C, (see column 3, lines 31-33) thus the microwaves produced (and steam produced as a result) in such an oven are operative (capable) to heat the seed sample to such a temperature which is effective to inactivate seeds in the seed sample.

CHILDRESS does not teach subjecting the seed sample to ozone.

However, CHILDRESS teaches using raw seeds (See column 4, lines 28-32) intended for consumption. It is common knowledge that agricultural foods commonly contain microorganisms (pathogenic organisms) and/or toxins (herbicides or pesticides) that can be harmful to the health of the consumer and can lead to the spoiling of food. Thus, it would have been obvious to one of ordinary skill in the art to modify CHILDRESS in view of DENVIR, as DENVIR teaches a process of decontaminating agricultural products with ozone. See column 5, lines 28-42 of DENVIR. In particular DENVIR teaches treating seeds with ozone to decontaminate foods exposed to toxins and microorganisms. See column 1, lines 13-18 of DENVIR. DENVIR teaches using an ozone concentration of 10 wt. %, see Example 1, which is seen as a concentration operative to significantly degrade herbicides and pesticides and operative to

Art Unit: 1793

substantially inactivate all pathogenic organisms present, as it is well above the concentration of 100-5000 ppm which is seen as being effective in the instant specification (page 8, lines 6-11).

One of ordinary skill in the art would have been motivated to modify CHILDRESS in view of DENVIR in order to produce a food product containing fewer toxins or in order to prevent the food product from spoiling. See column 1, lines 13-18 of DENVIR.

In regard to claim 2, CHILDRESS, does not teach a particular temperature.

However, it would have been obvious to one of ordinary skill in the art to use a temperature of higher than 95°C, as CHILDRESS teaches heating seeds in a microwave oven, and also teaches that temperatures of 350-450°C are typically encountered in such a microwave oven, and therefore it would be obvious to use such temperatures. See column 3, lines 29-35. Furthermore, in regard to claim 2, the microwaves (and steam) in CHILDRESS are operative (capable) to heat the seed sample to a treatment temperature of 95°C, as a microwave oven such as those used is operative to heat to temperatures of 350-450°C.

In regard to claim 3, CHILDRESS teaches the time of exposing the seeds to microwaves and steam determines the texture. See column 4, lines 63-65 of CHILDRESS. Thus the particular time chosen is a matter of design choice and routine optimization.

In regard to claim 4, neither DENVIR nor CHILDRESS teach an ozone concentration of 10-5000 ppm.

However, the concentration of ozone is well known to affect cost and quality of treatment. Therefore, the concentration of ozone is a matter of design choice and routine optimization that fails to produce an unexpected result.

In regard to claim 5, DENVIR and CHILDRESS do not teach Malathion, 2, 4,-D or thiamethoxam.

However, Malathion, 2, 4,-D and thiamethoxam are commonly used pesticides on plants containing seeds, and thus it would have been obvious to one of ordinary skill in the art to subject contaminated seeds to ozone decontamination treatment.

In regard to claim 6, DENVIR teaches decontaminating food products with spoiling microorganisms (see column 1, lines 13-18). Well known microorganisms include bacteria and fungi. Thus it would have been obvious to one of ordinary skill in the art to subject seeds contaminated with such microorganisms to ozone treatment.

In regard to claims 7 and 8, DENVIR and CHILDRESS do not teach the order of process steps as required by the claims.

However, all of the process steps are taught in the combination of the references, and "selection of any order of performing steps is *prima facie* obviousness in the absence of new of unexpected results". See MPEP 2114.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yvin US'009 teaches treating seeds with ozone to improve germination. Gross'460 teaches microwave treating nuts or seeds to reduce toxin content.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. ZIMMER whose telephone number is (571)270-3591. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ajz

/Steven Bos/

Primary Examiner, Art Unit 1793